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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,390	05/03/2001	Tuomo Juvakka	11001.075	3090

7590

08/27/2003

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EXAMINER

HUG, ERIC J

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/831,390	JUVAKKA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Eric Hug	1731	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

***Response to Amendment***

The following is in response to the amendment filed on June 16, 2003.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leighton (WO 98/27279) in view of Kivimaa (US 5,178,731) and further in view of Boucher (US 5,032,229). Leighton discloses a double doctor assembly having two doctor blades used in association for removing material from the surface of a rotating roll, which may be a suction roll (page 2, third paragraph). The double doctor is mounted on a common frame, with the two blades spaced apart sufficiently along the direction of the roll rotation. The first blade removes debris and creates a "foil effect" (negative pressure) for cleaning roll pores, while the second blade (trailing blade) removes any further debris missed by the first blade. Within the frame and between the two blades is a trough for collecting water which has been drawn from the surface of the roll. In Leighton both doctor blades are just that, blades. There is no teaching of using a doctor slat.

Kivimaa et al (US 5,178,731) discloses a doctor for a suction roll for removing water out of the perforations of the roll when the doctor blade is in contact with the roll surface. The blade has a slat face positioned at an angle tangentially to the surface of the roll, the angle being such that water can be effectively removed from the roll. The foremost portion of the slat, that is the leading tip with respect to the direction of rotation of the roll, is in contact with the roll. At the trailing end a suction effect is created between the slat and the roll for water removal. This

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negative pressure space between the slat and the roll provides for flow of water out of the perforations of the roll.

At the time of the invention, it would have been obvious to one skilled in the art to modify the double doctor of Leighton to include a slat face as disclosed by Kivimaa as the first blade (leading blade). By doing so would allow one to combine the improved dewatering capability of a slat with a collection trough for the removal of water and a subsequent blade for removal of any remaining debris. It would be obvious to position the slat as the first blade rather than the second blade, because the suction effect of the slat in the first blade position would conveniently pull water from the suction roll directly into the collection trough.

Optimizing the spacing between the two blades (i.e. slat and blade) to arrive at angle of position of 15-70 degrees therebetween with respect to the roll surface would have been prima facie obvious and within the level of one of ordinary skill in the art in order for both blades to function effectively and provide enough space in the trough to collect water. See *In re Boesch*, 205 USPQ 215 (CCPA 1980) (the discovery of an optimum value of a known result effective variable without producing any new or unexpected results is within the skill of the routineer in the art). Also, Boucher is cited to exemplify that an angle of 15 degrees or greater between doctor blades along a roll surface is well known, therefore, to optimize the angle between the blades of Leighton modified in view of Kivimaa would have been obvious. Optimizing the contact angle of each blade would have also been within the level of ordinary skill in order for both blades to function effectively. This in particular determines the degree of negative pressure following the slat.

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All features of the dependent claims, the detachability, the trapezoidal shape of the slat with base side contacting the roll (Kivimaa), and the plastic material are all disclosed or at least suggested for doctor blades by at least one of the above references.

New grounds of rejection not necessitated by amendment have been presented, therefore this office action is non-final.

### ***Response to Arguments***

Applicants arguments have been fully considered. Arguments pertinent to the above rejections and not found to be persuasive are addressed below:

Applicant argues that there is no hint in the prior art that would teach or suggest to replace a doctor blade of a double doctor device with a doctoring slat, as the prior art merely teaches a single slat and separately teaches a double doctor blade assembly. The examiner respectfully disagrees. The doctor slat of Kivimaa provides substantial increased water removing capability from a suction roll, primarily because of the presence of a negative pressure between the slat and the rotating roll. Since there is teaching of this negative pressure being present along a conventional doctor blade in Leighton, then one of ordinary skill in the art would recognize the advantage that a slat provides versus a conventional doctor blade for water removal. Combining the slat with a double doctor assembly as described above would provide improved dewatering of a suction roll and all the advantages sought by Applicant.

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The declaration under 37 CFR 1.132 filed June 16, 2003 is insufficient to overcome the rejection of the claims 6-9 under 35 U.S.C. 103(a) as being unpatentable over Leighton in view of Kivimaa and further in view of Boucher based upon the reasons as set forth above. The examiner acknowledges that a doctor blade and a doctor slat are two different devices which function at different contact angles. However, it is the examiner's opinion that there is sufficient teaching in the prior art that a doctor slat improves upon the dewatering of a suction roll, and to replace the leading doctor blade of a double doctor assembly with a doctor slat improves upon the dewatering capable of such an assembly.


In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 703 308-1980. The examiner can normally be reached on Monday through Friday, 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703 308-1164. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0651.

  
jeh

  
STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
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